



GR SERIES DIMENSIONS

STYLES: TMQ, TM, T

CAST IRON
GR SERIES

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

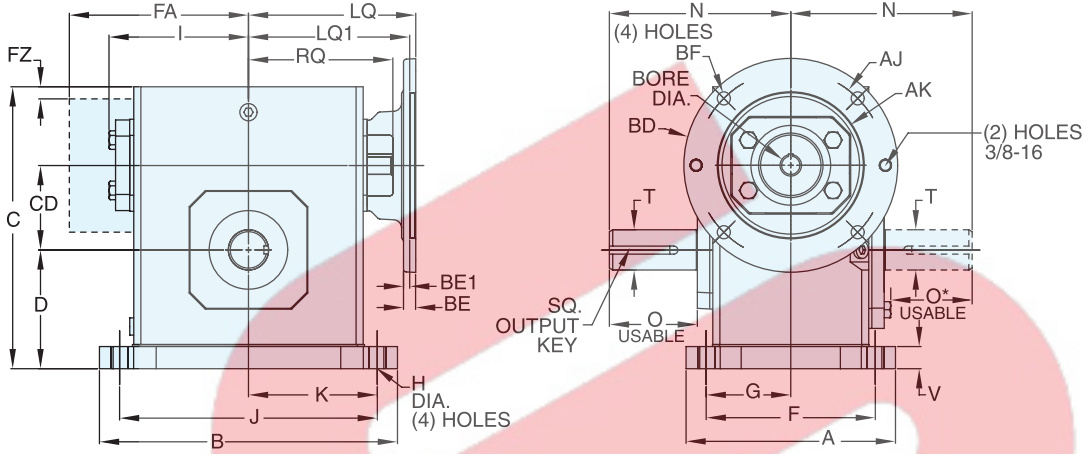
Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

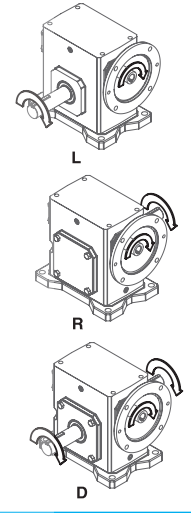
Ratio Multipliers

Accessories
Additional Capabilities

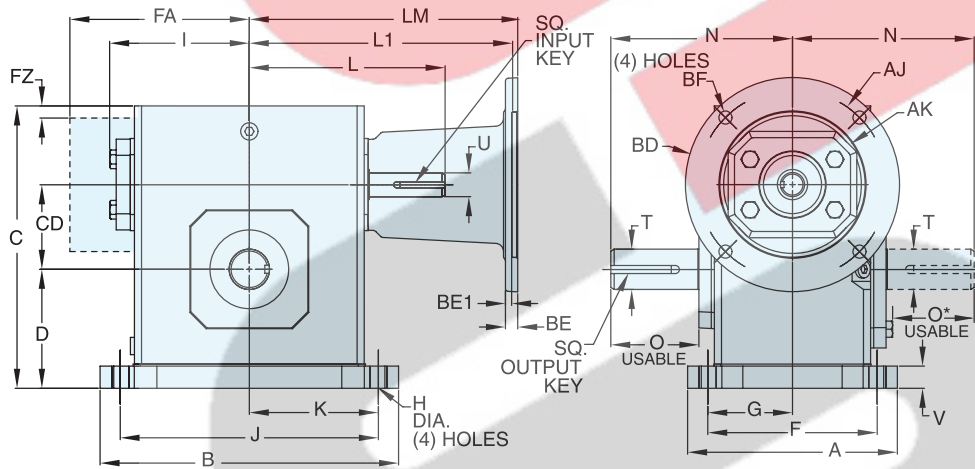
STYLE TMQ



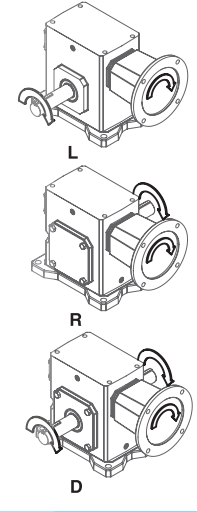
ASSEMBLIES



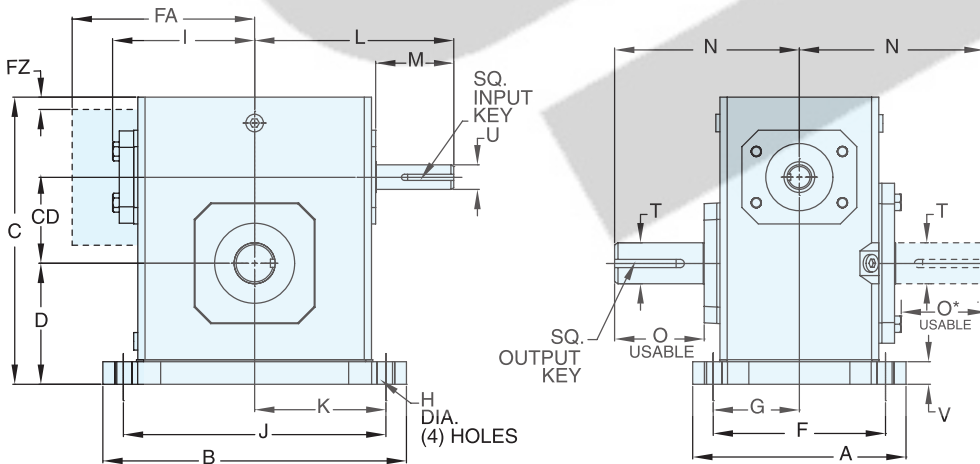
STYLE TM



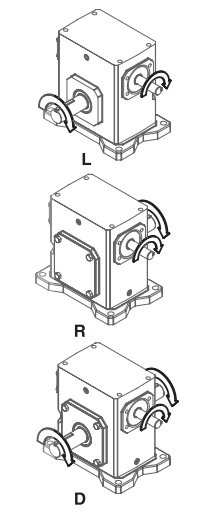
ASSEMBLIES



STYLE T



ASSEMBLIES



REVERSE ALL ARROWS FOR OPPOSITE INPUT SHAFT ROTATION. CONTACT FACTORY FOR OTHER MOUNTINGS OR ASSEMBLY POSITIONS.



STYLE TMO, TM, T DIMENSIONS (Inches)

Size	A	B	C	D	CD	F	FA▼	FZ▼	G	H	I	J	K	L	M	N	O	O*	V	T +0.000 -0.0015	U +0.000 -0.0015	Input Key**	Output Key
GR813	5.38	5.37	5.19	2.25	1.33	3.31	N/A	N/A	1.66	0.34	2.61	4.37	2.19	3.82	1.76	4.00	2.16	1.94	0.53	0.625	0.500	1/8 X 1.00	3/16 X 1.50
GR815	5.56	6.50	5.97	2.50	1.54	4.31	N/A	N/A	2.16	0.41	3.14	5.25	2.63	4.35	1.76	4.31	2.11	1.90	0.59	0.750	0.625	3/16 X 1.38	3/16 X 1.50
GR818	5.75	6.99	6.44	2.75	1.75	4.50	N/A	N/A	2.25	0.41	3.24	5.75	2.88	4.45	1.76	4.31	2.05	1.84	0.69	0.875	0.625	3/16 X 1.38	3/16 X 1.38
GR821	6.00	7.69	7.09	3.00	2.06	4.69	N/A	N/A	2.34	0.47	3.61	6.38	3.19	4.82	1.76	4.68	2.29	2.08	0.72	1.000	0.625	3/16 X 1.38	1/4 X 1.44
GR824	6.19	8.37	7.69	3.25	2.38	4.88	N/A	N/A	2.44	0.49	3.77	7.06	3.53	5.51	2.38	5.14	2.66	2.44	0.75	1.125	0.750	3/16 X 1.63	1/4 X 1.75
GR826	6.50	9.25	8.75	3.69	2.63	5.25	N/A	N/A	2.63	0.53	4.34	8.00	4.00	6.07	2.38	5.63	2.73	2.52	0.75	▲	0.750	3/16 X 1.63	1/4 X 1.75
GR830	7.50	10.00	9.63	4.00	3.00	5.88	N/A	N/A	2.94	0.53	4.84	8.44	4.22	6.57	2.38	6.75	3.60	3.36	0.75	1.250	0.875	3/16 X 1.63	1/4 X 1.75
GR832	7.75	11.12	10.25	4.38	3.25	6.13	N/A	N/A	3.06	0.53	5.02	9.50	4.75	6.76	2.38	7.06	3.66	3.42	0.81	▲	0.875	3/16 X 1.63	3/8 X 2.25
GR842	9.75	13.24	12.38	5.44	4.25	7.63	N/A	N/A	3.81	0.66	6.10	11.12	5.56	9.57	3.47	8.12	4.50	4.21	1.00	1.875	1.250	1/4 X 2.50	1/2 X 3.00
GR852	10.50	16.24	15.13	6.25	5.25	8.38	N/A	N/A	4.19	0.78	7.50	14.12	7.06	10.88	3.38	9.06	4.78	4.53	1.13	2.000	1.250	1/4 X 3.00	1/2 X 3.50
GR860	12.00	18.99	17.75	7.75	6.00	9.50	11.13	0.33	4.75	0.91	N/A	16.49	8.25	11.78	3.41	10.00	4.65	4.65	1.25	2.500	1.500	3/8 X 3.00	5/8 X 4.00
GR870	13.38	15.38	20.33	9.00	7.00	11.25	11.37	0.35	5.63	1.13	N/A	13.00	6.50	11.50	2.97	11.76	5.65	5.65	1.42	2.750	1.625	3/8 x 2.87**	5/8 x 4.00**
GR880	13.50	17.37	22.61	10.50	8.00	11.50	12.52	0.57	5.75	1.13	N/A	14.75	7.38	12.50	2.84	12.25	5.98	5.98	1.65	3.000	1.875	1/2 x 2.81**	3/4 x 4.50**
GR8100	16.88	21.14	27.12	12.00	10.00	14.00	14.69	0.51	7.00	1.44	N/A	17.00	8.50	15.50	3.76	14.75	6.76	6.76	1.65	3.750	2.250	1/2 x 3.69**	7/8 x 5.00**

▲ See feature comparison chart.

FEATURE COMPARISON (821, 826, 832)

Size	Output Shaft Diameter Needed◊	Mounting Footprint Needed◊	Output Key Needed◊	All Other Features	Grove Gear® Flexaline Interchange	LEESON IRONMAN Interchange	Replace With Series Code Below:
821	Identical	Identical	Identical	Identical◊	✓	✓	GRG
							GRL
826	1.250"	Identical	Identical	Identical	✓	✓	GRG
	1.125"						GRL
832	1.500"	Identical	3/8 x 2.63	Identical	✓	✓	GRG
	1.375"		5/16 x 2.63				GRL

◊ If Accessory kit is removed, dimensions will vary.

NOTE: If reducer is used without the accessory mounted, select based mounting dimensions on pages A52-A53 (B, BM, BMQ).

Motor Mounting Dimensions

NEMA DIMENSIONS (Inches)

Size	LM		L1		LQ 48CZ/56C/140TC	LQ1			RQ		
	48CZ	56C/140TC	180TC/210TC	250TC		180TC	210TC	250TC	48CZ/56C/140TC	180TC	250TC
GR813	5.63	6.07	N/A	N/A	3.46	N/A	N/A	N/A	3.09	N/A	N/A
GR815	6.16	6.60	N/A	N/A	3.99	N/A	N/A	N/A	3.62	N/A	N/A
GR818	6.26	6.70	N/A	N/A	4.09	N/A	N/A	N/A	3.59	N/A	N/A
GR821*	6.63	7.07	N/A	N/A	4.46	N/A	N/A	N/A	4.06	N/A	N/A
GR824	N/A	7.76	8.76	N/A	4.63	5.06	N/A	N/A	4.09	4.56	N/A
GR826*	N/A	8.32	9.32	N/A	5.19	5.62	N/A	N/A	4.82	5.13	N/A
GR830	N/A	8.82	9.82	N/A	5.95	6.15	6.56	N/A	5.32	5.63	N/A
GR832*	N/A	9.01	10.01	N/A	6.14	6.34	6.75	N/A	5.51	5.81	N/A
GR842	N/A	11.81	12.90	13.46	6.45	7.21	7.21	7.77	6.04	6.68	7.24
GR852	N/A	13.21	14.30	14.86	7.85	8.61	8.61	9.17	7.35	7.98	8.54
GR860	N/A	N/A	15.88	16.50	10.45	9.33	9.33	9.94	10.01	8.69	8.69
GR870	N/A	N/A	15.50	15.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A
GR880	N/A	N/A	16.58	16.58	N/A	N/A	N/A	N/A	N/A	N/A	N/A

IEC B5 & B3/B5 METRIC DIMENSIONS (Inches)*:

Size	LQ1						RQ					
	D63D	D71D	D80D	D90D	D100LD/D112MD	D132D	D63D	D71D	D80D	D90D	D100LD/D112MD	D132D
GR813	2.62	2.65	2.89	N/A	N/A	N/A	2.45	2.47	2.71	N/A	N/A	N/A
GR815	3.15	3.18	3.42	N/A	N/A	N/A	2.98	3.00	3.24	N/A	N/A	N/A
GR818	3.25	3.28	3.52	N/A	N/A	N/A	2.95	2.97	3.21	N/A	N/A	N/A
GR821*	3.62	3.65	3.89	N/A	N/A	N/A	3.43	3.44	3.68	N/A	N/A	N/A
GR824	N/A	3.72	4.34	N/A	N/A	N/A	N/A	3.46	3.71	N/A	N/A	N/A
GR826*	N/A	4.28	4.90	4.90	5.30	N/A	N/A	4.09	4.72	4.72	5.07	N/A
GR830	N/A	4.78	5.41	5.41	5.88	N/A	N/A	4.59	5.22	5.22	5.57	N/A
GR832*	N/A	4.97	5.59	5.59	6.07	N/A	N/A	4.78	5.41	5.41	5.76	N/A
GR842	N/A	N/A	N/A	6.38	6.39	7.17	N/A	N/A	N/A	6.16	6.14	6.93
GR852	N/A	N/A	N/A	7.78	7.78	8.57	N/A	N/A	N/A	7.46	7.45	8.24

- * Applies to double output shaft
- ** Key not provided with gear reducer. Keyway dimension shown.
- ◆ Keyway width by depth
- ⊙ Mounting holes rotated 45 degrees from positions shown on Size GR860, Style TM with frame sizes 180TC-250TC.
- 48CZ not available
- 180TC not available

- ⊕ Metric IEC B5 input flange options are available only on quill input styles.
- ✱ Dimensions same for GRG and GRL Series
- * Style T and TM only.
- ▼ Sizes 860-8100 are supplied with a fan. Dimensions refer to fan guard location.

NEMA DIMENSIONS (Inches)

Frame	AJ ^b	AK	BD	BE	BE1	Bore Dia.	Keyway◆	BF ^c
48CZ	3.75	3.00	4.36	0.38	N/A	0.500	1/8 X 1/16	0.28
56C	5.88	4.50	6.50	0.38	N/A	0.625	3/16 X 3/32	0.41
140TC	5.88	4.50	6.50	0.38	N/A	0.875	3/16 X 3/32	0.41
180TC	7.25	8.50	9.00	N/A	0.50	1.125	1/4 X 1/8	0.53
210TC	7.25	8.50	9.00	N/A	0.50	1.375	5/16 X 5/32	0.53
250TC	7.25	8.50	9.00	N/A	0.50	1.625	3/8 X 3/16	0.53

IEC B5 & B3/B5 METRIC DIMENSIONS (MM)

Frame	AJ	AK	BD	BE	Bore Dia.	Keyway◆	BF TAP	OD
D63D	115	95	117	10	11	4 X 2	M8 X 1.25	131
D71D	130	110	132	11	14	5 X 2.5	M8 X 1.25	146
D80D	165	130	165	15	19	6 X 3	M10 X 1.50	184
D90D	165	130	165	15	24	8 X 3.5	M10 X 1.50	184
D100LD/D112MD	215	180	216	18	28	8 X 3.5	M12 X 1.75	237
D132D	265	230	267	18	38	10 X 4	M12 X 1.75	290

▲ WARNING

For safety, purchaser or user should provide protective guards over shaft extensions and any couplings, sheaves and belts, sprockets and chains, etc., mounted thereon. Failure to take these precautions could result in death or serious injury.

Single Reduction
Worm Gear Reducers

Double Reduction
Worm - Worm Gear Reducers

Double Reduction
Helical - Worm Gear Reducers

WASHGUARD® Reducers
and GEAR+MOTOR™

Ratio Multipliers

Accessories
Additional Capabilities